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## Oral Health in Pregnancy: Old problem, New Findings Yet More Predicaments

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Sir,

Pregnancy is a physiological state substantiated by a number of transitory changes that may be presented as a variety of physical signs and symptoms having potential impact on the patient's health, acuity, and environmental interactions. Many women grumble of various symptoms that develop during this time.<sup>[1,2]</sup> The most common complaints that are reported during this state includes nausea and vomiting, nasal congestion, heartburn, alteration in taste and food cravings, hyperventilation and shortness of breath, and fatigue that are often caused by the physiologic changes of various body systems, which may sequentially cause unnecessary modification in the oral cavity and increased vulnerability to oral infection.<sup>[3]</sup>

The remarkable endocrinological changes seen in pregnancy and associated negligence of oral hygiene measures have a tendency to increase incidence of oro-dental diseases like gingivitis and increased incidence of dental caries. Pregnancy gingivitis is characterized by increased redness, edema, and higher tendency towards bleeding and inflammation that occurs as a result of increased circulating levels of progesterone and its effects on the microvasculature. Sex hormones like estradiol and progesterone can contribute to inflammatory processes by stimulating prostaglandin synthesis in the gingiva in pregnancy.<sup>[4]</sup> More interestingly, these hormones occasionally provide vital growth factors for the bacterium *Prevotella intermedia*, which show a striking increase in the sub-gingival plaque during pregnancy making the interproximal papillae red, edematous, and tender to palpation, and bleed easily if subjected to trauma (pyogenic granuloma or pregnancy tumor).<sup>[5]</sup>

The consequence of motherly periodontal health status on prematurity and low birth weight babies has been well-documented, yet the exact mechanism by which periodontal diseases causes preterm birth and/or low birth weight have not been explained.<sup>[6,7]</sup> However, one proposed mechanism is the nature of the periodontal disease itself, where the inflamed periodontal tissues produce significant amounts of inflammatory cytokines primarily interleukin1beta, IL-6, prostaglandin E<sub>2</sub>, and tumor necrosis factor alpha, which may have systemic effects on the host. Endotoxin derived from periodontal pathogens in pregnant women with periodontal disease may spark monocyte-macrophage cascade in the circulating blood stream.<sup>[8]</sup> Therefore, pregnant women must be well-motivated to maintain good oral hygiene and have the routine dental checkups done. The supervising clinical staff must also be scrutinized and

enquired regarding their awareness about these conditions or if they offered any recommendation or suggestions to such patients.[\[9\]](#) Quantitative data obtained from such act might be helpful in planning oral health education and encouragement programs to reduce the risk of adverse pregnancy outcomes.

## References

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1. Dellinger TM, Livingston HM. Pregnancy: Physiologic changes and considerations for dental patients. *Dent Clin N Am.* 2006;50:677–97. [\[PubMed\]](#) [\[Google Scholar\]](#)
2. Suresh L, Radfar L. Pregnancy and lactation. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2004;97:672–82. [\[PubMed\]](#) [\[Google Scholar\]](#)
3. Flynn TR, Susarla SM. Oral and maxillofacial surgery for the pregnant patient. *Oral maxillofac Surg Clin N Am.* 2007;19:207–21. [\[PubMed\]](#) [\[Google Scholar\]](#)
4. Cengiz SB. The pregnant patient: Considerations for dental management and drug use. *Quintessence Int.* 2007;38:133–42. [\[PubMed\]](#) [\[Google Scholar\]](#)
5. Lawrenz DR, Whitley BD, Helfrick JF. Considerations in the management of maxillofacial infections in the pregnant patient. *J Oral Maxillofac Surg.* 1996;54:474–85. [\[PubMed\]](#) [\[Google Scholar\]](#)
6. Offenbacher S, Katz V, Fertik G, Collins J, Boyd D, Maynor G, et al. Periodontal infection as a possible risk factor for preterm low birth weight. *J Periodontol.* 1996;67(10 Suppl):1103–13. [\[PubMed\]](#) [\[Google Scholar\]](#)
7. Dasanayake AP. Poor periodontal health of the pregnant woman as a risk factor for low birth weight. *Ann Periodontol.* 1998;3:206–12. [\[PubMed\]](#) [\[Google Scholar\]](#)
8. Clover MJ, Barnard JD, Thomas GJ, Brennan PA. Osteomyelitis of the mandible during pregnancy. *Br J Oral Maxillofac Surg.* 2005;43:261–3. [\[PubMed\]](#) [\[Google Scholar\]](#)
9. Bobetsis YA, Barros SP, Offenbacher S. Exploring the relationship between periodontal disease and pregnancy complications. *J Am Dent Assoc.* 2008;139:252. [\[PubMed\]](#) [\[Google Scholar\]](#)

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